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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/888,013	06/22/2001	Karen King	18938-2363001	8492

7590 07/06/2004
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EXAMINER

SALDANO, LISA M

ART UNIT PAPER NUMBER

3673

DATE MAILED: 07/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/888,013

Applicant(s)

KING ET AL.

Examiner

Lisa M. Saldano

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-13 and 16-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “weights...mounted over said frame assembly,” as claimed in claim 18, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, it is not clear what the applicant intend to claim with the recitation that “one or more weights are mounted over said frame assembly.” Furthermore, it is not apparent from the drawing where weights are mounted over the frame assembly. Examination on the merits of claim 18 has been performed as best understood.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Jaffrennou et al (4,398,844).

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Regarding claim 1, Jaffrennou et al disclose a floating boom structure that acts as a barrier to floating solid waste or chemical products, such as hydrocarbon spills, comprising a curtain or flexible skirt 1 that substantially impeded water there through. Jaffrennou et al disclose stiffeners or support structures 4,5 that are adapted to be underwater. They also disclose first and second attachment sleeves of successive elements created by looped and folded over portions of the curtain 1 at curtain ends near rod 16 (see Fig.4 and column 3, lines 59-65). The sleeves near rod 16 are slidably mounted on a first and second part 17 of the stiffeners or supports structures 4,5.

Regarding claim 8, Jaffrennou et al disclose that the flexible skirt or curtain 1 comprises longitudinal elements of high tensile strength (see column 2, lines 50-60). The flexible skirt thereby has high energy absorbing qualities.

Regarding claim 9, Jaffrennou et al disclose floatation devices 7,8 attached to curtain 1 via stiffeners 4,5 and arms 9,10.

6. Claims 11 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Geist (4,033,137).

Regarding claim 11, Geist discloses an articulated floating barrier 10 comprising first and second support members 18,19 constructed of rigid elements adapted to be positioned on a floor of a waterbody. The articulated floating barrier comprises a curtain 13 between first and second support members at least partially within the vertical extent of the support members wherein the support members allow the curtain to freely rise and fall in response to wave motion of the waterbody (see abstract and Fig. 1).

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Regarding claim 22, Geist discloses that the curtain 13 is formed of panels that my virtue of their existence of mass inherently contain some energy absorbing qualities.

7. Claim 24 is rejected under 35 U.S.C. 102(b) as being anticipated by Gauch (3,766,738).

Regarding claim 24, Gauch discloses an apparatus 10 comprising a curtain 11, a floatation device 16, support structure including a pipe 31 adapted to be disposed underwater, and first and second attachment sleeves including brackets 36 attached to the end of the curtain at frames 35 wherein the attachment brackets 36 are slidingly mounted on a part of the support pipe 31 (see Figs. 1&2).

8. Claims 11 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Pardee (3,762,168).

Regarding claims 11 and 24, Pardee discloses a water pollution control device with a barrier comprising curtain 20, a floatation device 21, first and second rigid support structures 23 adapted to be positioned on a floor of a waterbody and first and second attachment sleeves 22 attached to opposite ends of the curtain wherein the sleeves are slidingly mounted on support structure 23 (see Figs. 1&2). Pardee illustrate that the curtain is at least partially within the vertical extent of the support members. Furthermore, Pardee discloses that the flotation device 21 is secured to the curtain to permit the curtain to rise and fall with any change in the level of the water of the waterbody (see column 2, lines 15-29).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jaffrennou et al as applied to claim 1 above in view of Benedict et al (6,558,075).

Jaffrennou et al disclose a floating boom structure that acts as a barrier to floating solid waste or chemical products, such as hydrocarbon spills, comprising a curtain or flexible skirt 1 that substantially impeded water there through. Jaffrennou et al disclose stiffeners or support structures 4,5 that are adapted to be underwater. They also disclose first and second attachment sleeves of successive elements created by looped and folded over portions of the curtain 1 at curtain ends near rod 16 (see Fig.4 and column 3, lines 59-65). The sleeves near rod 16 are slidably mounted on a first and second part 17 of the stiffeners or supports structures 4,5.

However, Jaffrennou et al fail to disclose that the attachment sleeves comprise a pair of brackets.

Regarding claim 6, Benedict et al disclose structures for shoreline and land mass reclamation comprising curtain or screen grids 32 with support structures posts or poles 31 and attachment sleeves or band clamps 42 (see Fig.5) wherein the band clamps are attached to the

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curtains 32 at one end. The band clamps comprise a pair of brackets, each having a central indented section and first and second flanges on either side of the indented sections (see Fig.5).

Regarding claim 7, Benedict et al illustrate that the brackets of the band clamps are arranged to enclose the screen grid curtain at the indented section and sandwich the curtain at the flanges (see Fig.5).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the stiffeners of Jaffrennou et al to incorporate the posts/poles with band clamps having indented sections and flanges, as taught by Benedict, because Benedict teaches that this particular connection provides for the invention to withstand environments whereby the structure is above or below water surfaces (see column 6, lines 10-25). This connection further allows each section to be individually treated or removed in the case or need for repair. Furthermore, this connection provides for each screen to be independently vertically maneuvered without effecting the positioning of adjacent screens.

11. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jaffrennou et al as applied to claim 1 above in view of Pardee (3,762,168).

Jaffrennou et al disclose a floating boom structure that acts as a barrier to floating solid waste or chemical products, such as hydrocarbon spills, comprising a curtain or flexible skirt 1 that substantially impeded water there through. To review, Jaffrennou et al disclose floatation devices 7,8 attached to curtain 1 via stiffeners 4,5 and arms 9,10. Jaffrennou et al illustrate an embodiment wherein floatation devices at placed at an upper edge of stiffeners 4,5 (see Fig.6).

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However, Jaffrennou et al fail to disclose that the floatation devices are on an upper edge of the curtain.

Pardee discloses a water pollution control device with a barrier comprising curtain 20, a floatation device 21, support structure 23 and first and second attachment sleeves 22 attached to opposite ends of the curtain wherein the sleeves are slidingly mounted on support structure 23 (see Figs. 1&2). The floatation device 21 is attached on an upper edge of the curtain 20.

It would have been obvious to one of ordinary skill in the art at the time of the invention to attach the floatation device of Jaffrennou et al fail on an upper edge of the curtain 20, as taught by Pardee, because it still serves the purpose and provides the function of lift and buoyancy to the invention at that location. Placing the floatation device at either of the two locations as designated by Jaffrennou et al or Pardee is a matter of design choice. Furthermore, Jaffrennou et al illustrate an embodiment wherein floatation devices are placed at an upper edge of stiffeners 4,5 (see Fig.6).

12. Claims 11, 2, 3, 4, 12, 13, 16 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ruhlman (3,691,773) in view of Pardee (3,762,168).

Ruhlman discloses a breakwater system comprising first and second support members extending from either edge of curtain at foam support 42 down to the support anchor 20 located in the water-body's floor near loop 32 (see Figs.5 and 7). Both components of each of the first and second support elements are generally rigid. Ruhlman further discloses a curtain 10 attached between the support elements being partially within the vertical extent of the support members wherein the curtain may freely rise and fall in response to wave action (see Figs.8 and 9).

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Regarding claims 3, 4 and 21, Ruhlman discloses the use of flexible fabric (see column 3, lines 30-35) in the fabrication of the curtain panels. The flexible panel fabric inherently contains energy absorbing qualities by virtue of its flexibility and mass.

Regarding claims 12 and 13, Ruhlman discloses a breakwater system wherein the first and second support members include top frame section 42 and bottom frame section anchor 20. Both are pivotally connected at loop 32. A portion of the curtain is attached to top frame section and a portion is attached to the bottom frame section through loop 32.

Regarding claim 16, Ruhlman discloses a breakwater system wherein anchor 20 is attached to a base plate near the waterbody's floor (see Fig. 7). The frame assembly extends upward from the base plate.

Regarding claims 22 and 23, Ruhlman discloses a flotation device 16 attached along the upper edge of the curtain.

However, Ruhlman fail to explicitly disclose that the curtain wil freely fall after a wave passes and the height of the waterbody at that location is reduced. Ruhlman also fails to disclose looped sections of curtain for attaching the curtain to the support structure. Ruhlman also fails to disclose the use of threading and hook-and-loop fasteners.

Pardee discloses a water pollution control device with a barrier comprising curtain 20, a flotation device 21, first and second rigid support structures 23 adapted to be positioned on a floor of a waterbody and first and second attachment sleeves 22 attached to opposite ends of the curtain wherein the sleeves are slidingly mounted on support structure 23 (see Figs. 1&2). Pardee illustrate that the curtain is at least partially within the vertical extent of the support members. Furthermore, Pardee discloses that the flotation device 21 is secured to the curtain to permit the

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curtain to rise and fall with any change in the level of the water of the waterbody (see column 2, lines 15-29).

Regarding claim 2, Pardee discloses looped sections 23 of curtain for attaching the curtain to the support structure 23 (see Fig.2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the flotation curtain of Ruhlman to incorporate the rigid support structures first and second attachment sleeves attached to opposite ends of the curtain wherein the sleeves are slidingly mounted on support structure, as taught by Pardee because Ruhlman discloses that the foam support members are mainly to keep the curtain vertical (see Ruhlman column 5, lines 30-40). Ruhlman also discloses that the flotation means 16 is meant to ride along the surface of the water to mainly serve as an obstacle to surface debris (see column 1, lines 60-70). Therefore, it would be advantageous to incorporate the posts of Pardee, that still maintain the rigidity and verticality of the curtain, with the flotation device of Pardee and the ability of the flotation device to rise and fall with the level of the water in the waterbody, because that ensures that debris is contained regardless of the water level and turbulent nature of the waterbody.

Moreover, regarding claims 3 and 4, it would have been obvious to one of ordinary skill in the art to modify the flexible fabric curtain panels of Ruhlman and incorporate looped sleeves sections of flexible fabric to slidingly engage rigid posts or poles, as taught by Pardee, because of the benefit of the vertical movement regardless of water level as discussed above. Furthermore, threading and hook-and-loop fastening methods are well known in the art of fastening objects to one another. These fastening methods are used in most every manufacturing industry whereby items or elements are securely fastened.

13. Claims 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ruhlman in view of Pardee, as applied to claim 16 above, in view of Kellner (877,201).

Ruhlman and Pardee disclose the inventions as described above.

However, Ruhlman and Pardee fail to disclose the use of weights on a baseplate of the barriers.

Regarding claims 17-19, Kellner discloses a current-deflector comprising a wire screen 4, a series of holders connecting portions of the wire screens, buoys 11 and weights 12 to counterbalance the buoys 11 and sustain the curtain in a substantially vertical position (see lines 75-85).

Regarding claim 20, Kellner discloses a supplemental plate anchor 13 located remotely from first anchor and weight 12 and a connector element 15 extending between the supplemental plate anchor 13 and the curtain frame (see Fig.3).

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide weights at the base of the Ruhlman baseplate, as taught by Kellner, because the added weight and supplemental anchor provides gravitational forces to maintain the curtain in a desired area/region within the waterbody, particularly during high turbulence when the shoreline may suffer from scour and remove the sand/soil cover of the baseplate.

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Allowable Subject Matter

14. Claims 14 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Campbell et al (4,016,726), March et al (4,270,874), O'Fearn (4,576,364), Light, Jr. (3,984,987), Casey (3,973,406), Manzano et al (5,054,960) and Makosa (4,969,500) disclose features that are pertinent to the present application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lisa M. Saldano whose telephone number is 703-605-1167. The examiner can normally be reached on Monday-Friday, 8:30am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather C. Shackelford can be reached on 703-308-2978. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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